1	Number: /0/079,042 CRF Pro Edited by Verified	
	I E D ~	o the next line.
		o ule next line.
	Edited a format error in the Current Application Data section, specifically:	· .
	Edited the Current Application Data section with the actual current number. The applicant was the prior application data; or other	
	Added the mandatory heading and subheadings for "Current Application Data".	, <del>.</del>
	Edited the "Number of Sequences" field. The applicant spelled out a number in	stead of using an i
	Changed the spelling of a mandatory field (the headings or subheadings), speci	ifically:
	Corrected the SEQ ID NO when obviously incorrect. The sequence numbers th	at were edited wer
	Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO	's edited:
	Corrected subheading placement. All responses must be on the same line as eapplicant placed a response below the subheading, this was moved to its appropriate the subheading.	
	Inserted colons after headings/subheadings. Headings edited included:	
	Deleted extra, invalid, headings used by an applicant, specifically:	
	Deleted: non-ASCII "garbage" at the beginning/end of files; secretary is page numbers throughout text; other invalid text, such as	nitials/filename at o
	Inserted mandatory headings, specifically:	
	Corrected an obvious error in the response, specifically:	
	Edited identifiers where upper case is used but lower case is required, or vice v	ersa.
	Corrected an error in the Number of Sequences field, specifically:	
•	A "Hard Page Break" code was inserted by the applicant. All occurrences had to	o be deleted.
	Deleted ending stop codon in amino acid sequences and adjusted the "(A)Lengt due to a Patentin bug). Sequences corrected:	h:* field according
	Other:	
•		
		•

Action. DO NOT send a copy of this form.

3/1/95





RAW SEQUENCE LISTING

DATE: 03/14/2002

PATENT APPLICATION: US/10/079,042

TIME: 13:49:55

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Output Set: N:\CRF3\03142002\J079042.raw

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     9 <120> TITLE OF INVENTION: Methods to Identify Evolutionarily Significant Changes in
Polynucleotide
              and Polypeptide Sequences in Domesticated Plants
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     14 <130> FILE REFERENCE: GENO200.1/CIP
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C--> 18 <141> CURRENT FILING DATE: 2002-02-19
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24 <150> PRIOR APPLICATION NUMBER: US 60/349,088

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130	anna	glai	.ca g	, caya	gaay	or at	++2+	++4+	tac	ctaa	σat	cata	cato	ta t	.ασaa	atgga	
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171	Met	LCG	agg	Crra	Dho	Dro	Tur	Dro	Dro	Pro	Glv	Tvr	Val	Ara	Asn	Pro	
		ser	Arg	Cys	5 Fine	PIO	1 Y I	FIU	FIO	10	OLI	- 1 -	,	9	15		
173	ı gtg		~~~	~+~		~~~	aaa	maa	aca		aca	acc	act	ааσ		caq	96
1/5	gcg Val	gtg	310	919	315	31a	71a	Clu	λla	Cln	Δla	Thr	Thr	Lvs	Leu	Gln	
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1/9	aaa Lys	gaa	agg	gaa	aay	312	Clu	Tre	Luc	Tue	Glu	Lvc	Ara	Ser	Asp	Ara	
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181	aaa		35		+	~~+	a 2 a		+00	220	cat	tca		cga	acc	cac	192
183	aaa Lys	gct	CLL	CCa	Cat	991	gay	TIA	Cor	Tre	Uic	Sor	T.vg	Δra	Thr	His	
			ьeu	Pro	HIS	СТА	GIU	TTE	ser	гуз	птэ	60	цуз	nry	1111	1110	
185		50					55	~~~	2+4	+	22+		a a t	can	aan	téc	240
187	cac	aag	aag	aga	aaa	Cat	yaa	yac	TIO	aat Aan	Aan	715	) ac	Gln	T.ve	Ser	
	His	Lys	Lys	Arg	ьys		GIU	ASP	тте	ASII	75	MIG	vob	GIII	цyз	80	
189	65				<b>.</b>	70		a = +	~~+	~~~		++~	as a	aar	ant		288
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								COT	$-\tau \alpha \alpha$	TTT	act	Cad	ard.	uau	L.al.		220

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233	Giu	Mec	Deu	лти	245	Vul	GLY	110	DEI	250	Der	цур	niu	цур	255	110	
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273	-		-		405		-		-	410				-	415		
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281	пеп	FIO	435	пеп	птэ	Val	TYL	440	пеп	FIO	TAT	Val	445	PIO	FIIE		
	<b>~21</b> (	)		ои с	. 2			440					443				
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		2> TY			<b>x</b> /												
				ISM:	Orw	79 62	a	037	λ 🕏 1	100n:							
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297		261	Ary	Cys	5	PIO	тут	PIO	PIO	10	GIY	тут	Val	Ary	15	PIO	
		17 <b>-</b> 1	7 1 n	170 T	-	212	210	<b>~1</b>	310		<b>3.1</b>	mb	mh	T		<b>01</b> =	
	Val	val	Ата	Val	Ата	Ата	Ата	GIU		GIII	нта	TIIT	THE	_	ьеи	GIII	
301	<b>T</b>	<b>a</b> 1	3	20	<b>.</b>	31-	01	<b>T</b>	25	<b>T</b>	<b>a</b> 1	<b>-</b>		30		3	
	гля	GIU	_	Glu	гуѕ	Ата	GIU	_	гая	ьys	GIU	гаг	_	ser	Asp	Arg	
305	_		35	_		<b>~</b> 3		40	_	_		_	45	_	-1	1	
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309		50	_	_	_	•	55	_		_	_	60	_	~ 1	_	_	
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393	385	Dwo	n an	ת 1 ת	C117		C137	λen	Cve	Δτα		Tle	Va l	Asp	Pro		
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	THE	ser	GIII	420	на	GIU	GIII	rne	425	шси	01	110	9	430			
401	T 011	Dro	λan		иie	Val	Tvr	G1n	Leu	Pro	тvr	٧al	Val		Phe		
404	пеп	PIO	435	пеи	1113	VUI	-1-	440	Lou		-1-		445				
	<b>~21</b>	0> S:		סוא מ	. 4												
		1> L															
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						za s	ativ	a cv	. Ni	ppon:	bare						
		0> S												•			
419	aaa	aata	agc	ttag	qccq	ga c	qccq	gggc	a tc	agcc	atgt	cga	ggtg	ctt	cccc	tacccg	60
421	cca	ccaa	aat .	acqt	qcqa	aa c	ccag	tggt	g gc	cgtg	gccg	cgg	ccga	agc	gcag	gcgacc	120
	act		,,				_										126
		0>້S	EQ I	D NO	: 5												
		1> L															
430	<21	2> T	YPE:	DNA													
432	<21	3> 0	RGAN	ISM:	Ory	za s	ativ	a cv	. Ni	ppon	bare						
		0> F															
438	<22	1> N	AME/	KEY:	CDS												
440	<22	2> L	OCAT	ION:	(1)	(1	344)										
442	<22	3> 0	THER	INF	ORMA	TION	:										
446	<40	0> S	EQUE	NCE:	5												4.0
447	atg	tcg	agg	tgc	ttc	ccc	tac	ccg	ccg	ccg	ggg	tac	gtg	cga	aac	cca	48
448	Met	Ser	Arg	Cys	Phe	Pro	Tyr	Pro	Pro		Gly	Tyr	Val	Arg	Asn	Pro	
449					5					10					15		0.0
451	gtg	gtg	gcc	gtg	gcc	gcg	gcc	gaa	gcg	cag	gcg	acc	act	aag	ctc	cag	96

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 03/14/2002 PATENT APPLICATION: US/10/079,042 TIME: 13:49:56

Input Set : A:\Pto.amc

Output Set: N:\CRF3\03142002\J079042.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:17; N Pos. 1950,2032
Seq#:18; N Pos. 889,971
Seq#:18; Xaa Pos. 297,324
Seq#:19; Xaa Pos. 297,324
Seq#:21; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Seq#:21; Xaa Pos. 1,2,3,4,5
Seq#:22; Xaa Pos. 1,2,3,4,5
Seg#:35; Xaa Pos. 170
Seq#:36; Xaa Pos. 170
Seq#:42; Xaa Pos. 247
Seg#:43; Xaa Pos. 247
Seq#:51; Xaa Pos. 329
Seq#:52; Xaa Pos. 329
Seq#:55; Xaa Pos. 234
Seq#:56; Xaa Pos. 234
Seg#:75; N Pos. 82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100
Seq#:75; N Pos. 101,102,103,104,105,106,107,108,109,110,111,112,113,114,115
Seq#:75; N Pos. 116,117,118,119,120,121,122,123,124,125,126,127,128,129,130
Seq#:75; N Pos. 131,132,133,134,135,136,137,138,139,140,141,142,143,144,145
Seq#:75; N Pos. 146,147,148,149,150,151,152,153,154,155,156,157,158,159,160
Seq#:75; N Pos. 161,162,163,164,165,166,167,168
Seq#:75; Xaa Pos. 28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46
Seq#:75; Xaa Pos. 47,48,49,50,51,52,53,54,55,56,324
Seq#:76; Xaa Pos. 28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46
Seq#:76; Xaa Pos. 47,48,49,50,51,52,53,54,55,56,324
Seq#:78; N Pos. 52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71
Seg#:78; N Pos. 72,73,74,75,76,77,78,79,80,81
Seq#:78; Xaa Pos. 18,19,20,21,22,23,24,25,26,27
Seq#:79; Xaa Pos. 18,19,20,21,22,23,24,25,26,27
Seq#:82; Xaa Pos. 420
Seq#:83; Xaa Pos. 420
Seq#:89; N Pos. 649,857,879,900,1013,1040,1046,1061,1062,1068,1091,1096
Seq#:89; N Pos. 1101,1107,1109,1132,1142,1150,1157,1158,1197,1204,1219,1224
Seq#:89; N Pos. 1240,1254,1262,1272,1285,1287,1301,1310,1324,1333,1345,1352
Seg#:89; N Pos. 1353,1360,1372,1384,1397
```

## Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 9



RAW SEQUENCE LISTING

DATE: 03/14/2002

PATENT APPLICATION: US/10/079,042

TIME: 13:41:24

**Does Not Comply** 

Corrected Diskette Needed

Input Set : A:\Pto.amc

Output Set: N:\CRF3\03142002\J079042.raw

- 5 <110> APPLICANT: Messier, Walter
- 9 <120> TITLE OF INVENTION: Methods to Identify Evolutionarily Significant Changes in Polynucleotide
  - 10 and Polypeptide Sequences in Domesticated Plants
  - 14 <130> FILE REFERENCE: GENO200.1/CIP
- C--> 18 <140> CURRENT APPLICATION NUMBER: US/10/079,042
- C--> 18 <141> CURRENT FILING DATE: 2002-02-19
  - 18 <150> PRIOR APPLICATION NUMBER: US 09/240,915
  - 20 <151> PRIOR FILING DATE: 1999-01-29
  - 24 <150> PRIOR APPLICATION NUMBER: US 60/349,088
  - 26 <151> PRIOR FILING DATE: 2002-01-16
  - 30 <150> PRIOR APPLICATION NUMBER: US 09/368,810
  - 32 <151> PRIOR FILING DATE: 1999-08-03
  - 36 <150> PRIOR APPLICATION NUMBER: US 09/875,666
  - 38 <151> PRIOR FILING DATE: 2001-06-06
  - 42 <150> PRIOR APPLICATION NUMBER: US 60/315,595
  - 44 <151> PRIOR FILING DATE: 2001-08-29
  - 48 <160> NUMBER OF SEQ ID NOS: 91
  - 52 <170> SOFTWARE: PatentIn version 3.1

## ERRORED SEQUENCES

- 9170 <210> SEQ ID NO: 91 9172 <211> LENGTH: 2157
- 9174 <212> TYPE: DNA
- 9176 <213> ORGANISM: Oryza sativa cv. Nipponbare
- 9180 <400> SEQUENCE: 91
- 60 9181 togaccagat oggtogocaa tottttagtg gotgacogtg gaaagaggat attactgact 9183 tcqqtttqct aattttqqtt qtqccqttqa atctqaaata accaqaataq tcatqqqqaa 120 9185 aaaagtotga totggaaggt togaattaca tttotatata ttgttgtgot cocagacgat 180 9187 ggttgcaaga aatcactcat gctggataaa attgtggatg taagagtctg cagtcgttaa 240 9189 aatctggaaa cagcacattt tgccgtagta aatttgaatc catgttgctg tctcgttatt 300 9191 ggtgttatc gagtaacctg tgtgttgtta tctccgcttg gactagattc caagtaatcc 360 9193 agtgccttca tgacctgcaa attctatgcc tatgaagtaa catgaacagt ttgtatgtat 420 9195 gtattctgtt gatgcatact tgcattattt gtgagatgta catgttgtgg taaaattttg 480 540 9197 cattcaccat atagaaatag taactgacta teettgttta gttegaaaac taetgeaggt 9199 ttagttattc tctqttqcca agagtqcttg ttatgattgt aagggttaca gttctqtgac 600 9201 taaccatqta acaaatatat taaggattat caaattattc tatqtgaagt gtccqtgccc 660 9203 taattgtgtt atcttctgta actgatagca caacatttgt ttcctgctgt gtgcttgtgt 720 780
- 9205 aaattggtac ttcatcatta ctatatattt caaagaaaat tctgcattgc attcccgtcg
- 9207 teegttetaa ateagaaetg aegattgete tggtggetga ageteeagaa agaaagggaa 840 9209 aaggetgaaa agaagaaaga gaaaaggagt gacaggaaag etetteeaca tggtgagata 900
- 9211 tecaageatt caaagegaac ecaceacaag aagagaaaac atgaagacat caataatget 960

RAW SEQUENCE LISTING DATE: 03/14/2002 PATENT APPLICATION: US/10/079,042 TIME: 13:41:25

Input Set : A:\Pto.amc

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9213 gatcagaagt cccqqaaggt ttcctccatg gaacctggtg agcaattgga gaagagtgga
                                                                               1020
     9215 ctctcagaag agcatggagc tccttgcttt actcagacag agcatggctc tccagagagt
                                                                               1080
     9217 tcacaggaca gcagcaagag aagaaaggtt gtgttaccca gtcctagcca agctaagaat
                                                                               1140
     9219 ggtgaggccc tttcttgcat ttgtcttctt ttagctggtg atgttgaatt ggtttgactt
                                                                               1200
     9221 atcctqaatt atcatcttqc aqqtaacatc cttcqaataa aqataaqaaq aqatcaaqat
                                                                               1260
     9223 tetteagett ecetttegga gaaatetaat gttgtacaaa caecagttea teaaatggga
                                                                               1320
     9225 tcagtttcat ctctgccaag taagaaaaac tcaatgcaac cacacaacac cgaaatgatg
                                                                               1380
                                                                               1440
     9227 gtgagaacag catcaaccca gcagcaaagc atcaaaggtg attttcaagc agtaccgaaa
     9229 caaggtatgc caaccccagc aaaagtcatg ccaagagtcg atgttcctcc atctatgagg
                                                                               1500
     9231 qcatcaaaqq aaaqqattqq ccttcqtcct qcaqaqatqt tqqccaatqt tqqtccttca
                                                                               1560
     9233 ccctccaagg caaaacagat tgtcaatcct gcagctqcta aggttacaca aagagttgat
                                                                               1620
     9235 cctccacctg ccaaggcatc tcagagaatt gatcctctgt tgccatccaa ggttcatata
                                                                               1680
     9237 gatgctactc gatcttttac gaaggtctcc cagacagaga tcaagccgga agtacagccc
                                                                               1740
     9239 ccaattetga aggtgcctgt ggctatgcct accatcaatc gtcagcagat tgacacctcg
                                                                               1800
     9241 cageccaaag aagageettg eteetetgge aggaatgetg aagetgette agtateagta
                                                                               1860
     9243 gagaagcagt ccaagtcaga tcgcaaaaag agccgcaagg ctgagaagaa agagaagaag
                                                                               1920
     9245 ttcaaagatt tatttgttac ctgggatcct ccgtctatgg aaatggatga tatggatctc
                                                                               1980
     9247 ggggaccagg attggctgct tgatagtacg aggaaacctg atgctggcat tggcaactgc
                                                                               2040
     9249 agagaaattq ttgatccact tacttctcaa tcagcagagc agttctcatt gcagcctagg
                                                                               2100
     9251 g¢gattcatt taccagacct tcatgtctat cagttgccat atgtggttcc attctag
E--> 9254 (1)
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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/079,042

DATE: 03/14/2002 TIME: 13:41:26

Input Set : A:\Pto.amc

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L:18 M:270 C: Current Application Number differs, Replaced Current Application No
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1837 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:1920
L:1839 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:1980
L:1969 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:864
L:1970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:912
L:1977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:960
L:1978 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:1008
L:2126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:288 L:2134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:320
L:2291 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:2292 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:48
L:2474 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:3660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:528
L:3794 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:160
L:4422 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:42 after pos.:768
L:4556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43 after pos.:240
L:5182 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:1008
L:5316 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:320
L:5520 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:720
L:5654 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:224
L:7351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:48
L:7352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:96
L:7355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:96
L:7356 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:144
L:7359 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:144
L:7360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:192
L:7428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:1008
L:7782 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:16
L:7786 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:32
L:7790 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:48
L:7858 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:320
L:7941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:48
L:7942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:96
L:8176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:79 after pos.:16
L:8498 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:1296
L:8632 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:416
L:9083 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:600
L:9091 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:840
L:9095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:960
L:9097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1020
L:9099 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1080 L:9101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1140
L:9103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1200
L:9105 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1260
L:9107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1320
L:9109 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89 after pos.:1380
L:9254 M:254 E: No. of Bases conflict, LENGTH:Input:1 Counted:2157 SEQ:91
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